REMARKS

Claims 61 and 63-91 were presented for examination in the present application and remain pending for consideration upon entry of the instant amendment, which is respectfully requested. Claims 61, 90, and 91 are independent.

Independent claims 61 and 90, as well as dependent claims 63-73, 75-78, and 82-89, were rejected under 35 U.S.C. §103(a) over U.S. Patent No. 3,409,725 to Penberthy et al. (the Penberthy '725 patent) in view of newly cited U.S. Patent No. 6,235,075 to Hofmann et al. (the Hofmann patent). Independent claim 91 was rejected under 35 U.S.C. §103(a) over the combination of Penberthy '725 and Hofmann patents in view of newly cited U.S. Patent No. 2,749,379 to Geffcken et al. (the Geffcken patent). Dependent claims 74 and 79-81 were rejected under 35 U.S.C. §103(a) over the Penberthy '725 and the Hofmann patents in further view of U.S. Patent No. 4,159,392 to Fineo et al. (Fineo) or U.S. Patent No. 4,468,779 to Gillman (Gillman).

Applicants respectfully traverse these rejections.

The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). See also *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.")

Applicants respectfully submit that the Office Action has failed to meet its burden of establishing a *prima facie* case of obviousness because the Office Action has failed to determine the level of skill in the art.

Specifically, the Office Action has presented no line of reasoning, and we know of none, as to who one skilled in the art is or why that person viewing the collective teachings of the Peneberthy '725, Hofmann, and Geffcken patents would have found it obvious to selectively pick and choose various elements and/or concepts from the several references relied upon to arrive at the claimed invention. Rather, Applicants submit that the collection of references and the lack of the necessary underlying factual determinations support the inescapable conclusion that the Office Action has simply pieced the references together to support a rejection on the basis of hindsight.

Additionally, Applicants respectfully submit that the Office Action has failed to meet its burden of establishing a *prima facie* case of obviousness because the Office Action has failed to establish that the proposed combination of the Peneberthy '725 and Hofmann patents disclose each element of the claims.

Independent claims 61 and 91 each recites, in part, "electrode passing through the wall opening so as to be **immersed in**" the melt. Independent claim 90 recites, in part, the step of "passing at least one electrode passing through an opening in the wall so as to be **immersed in**" the melt.

The Office Action asserts that the Peneberthy '725 patent discloses the claimed electrode. Further, the Office Action asserts that the Hofmann patent discloses the claimed shielding basket.

The Peneberthy '725 patent requires that the electrically active inner end 18 is **submerged in** the molten glass. See col. 3, lines 69-71 and FIGS. 1-2. However, the Hofmann patent specifically discloses that sleeve 14 is used to **prevent contact** between the charge materials (i.e., the melt) and the electrode. See col. 1, lines 38-52.

In the embodiment of FIG. 1 of the Hofmann patent, the electrode 21 is

completely surrounded by the sleeve 14 and cover 15, preventing contact between the charge materials and the electrode 21. In the embodiment of FIGS. 2 and 3 disclosed by the Hofmann patent, the sleeve 14 leaves a bottom portion of electrode 21 exposed. However, in these embodiments, as best understood from the limited disclosure, the devices use feed devices 31 and base openings 13 to prevent contact between the charge materials and the electrode 21.

Applicants submit that the proposed modification of the electrode disclosed by the Peneberthy '725 patent (which requires submersion of the electrode in the melt) to include the sleeve 14 disclosed by the Hofmann patent (which prevents contact between the electrode and the melt) would render the respective devices unsuitable, if not completely inoperable, for their intended purposes.

Modification that renders apparatus unsuitable for its intended purpose cannot be said to have been obvious to one of ordinary skill in the art. See Ex parte Rosenfeld, 130 USPQ 113, 115 (Bd. App. 1961).

The Office Action fails to assert that the remaining cited art, namely Fineo, Gillman, or Geffcken, cure the aforementioned and other deficiencies in the combination of the Peneberthy '725 and Hofmann patents. Accordingly, Applicants maintain that every element of claims 61, 90, and 91 is not disclosed or suggested by the cited art.

None-the-less, and merely in the interest of expediting prosecution, independent claims 61 and 91 have each been clarified to be directed to "A unit for a conductively heatable **glass melt** (emphasis added)". Similarly, independent claim 90 has been clarified to be directed to "A method for reducing the local introduction of heating power into at least one region of a wall of a unit for a conductively heatable **glass melt** (emphasis added)". Conforming amendments were made to throughout each claims, as well as to the claims dependent therefrom.

In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) ("A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem."); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993).

Applicants submit that the Hofmann patent is non-analogous art to the Peneberthy '725 and Geffcken patent such that the proposed combination of cited art fails to disclose or suggest present claims 61, 90, or 91.

The Hofmann patent is directed to a process and method for generating high silicon **foundry pig iron**. See Abstract. In contrast, the Peneberthy '725 and Geffcken patents, as well as present claims 61, 90, and 91, are directed to **glass melts**.

Thus, Applicants submit that the pig iron apparatus and process of Hofmann patent are clearly not in the field of Applicants' endeavor (e.g., glass melts).

Further, Applicants submit that the Hofmann patent does not deal with matter that would logically have commended itself to an inventor's attention in considering the problem resolved by present claims 61, 90, and 91.

The present application discloses with respect to prior art glass melting devices and methods, at least at page 10, lines 1-15, that: "The underlying problem in the context outlined above resides in the spatially extremely nonuniform distribution of the

introduction of heating power into the wall of the tank, which causes damage to the refractory material."

In contrast to the above referenced problem resolved by present claims 1, 90, and 91, the Hofmann patent is directed to a process and apparatus that provides high-silicon foundry pig iron without the need for high priced iron silicide (FeSi). Rather, the device and apparatus of the Hofmann patent allows for the use of lower cost silicon oxide (SiO). See col. 1, lines 17-34.

Thus, Applicants submit that the Hofmann patent is simply not directed to resolving the problem resolved by the invention of present claims 61, 90, and 91.

Accordingly, Applicants submit that the Hoffman patent is non-analogous art to the remaining references cited by the Office Action such that the proposed combination of cited art fails to disclose or suggest present claims 61, 90, or 91.

Accordingly, Applicants submit that the Office Action has failed to establish a *prima facie* case of obviousness, has failed to establish that every element of claims 61, 90, and 91 is disclosed or suggested by the cited art, and has used non-analogous art in its rejection. As such, Applicants submit that claims 61, 90, and 91, as well as claims 63-89 that depend therefrom, are allowable over the proposed combination of cited art. Reconsideration and withdrawal of the rejection to claims 61 and 63-91 are respectfully requested.

Summary

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is solicited.

In the alternative, Applicants submit that the instant amendment places the present application in better condition for appeal. Accordingly, entry and consideration of the instant amendment, at least for the purposes of appeal, are respectfully requested. Furthermore, Applicants submit that the instant amendment merely clarifies the claims such that further search and consideration is not required.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below.

Respectfully submitted,

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